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Milliken & Company
P.O. Box 1927
Spartanburg, SC 29304

EXAMINER

BARR, MICHAEL E

ART UNIT	PAPER NUMBER
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1762

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Please find below and/or attached an Office communication concerning this application or proceeding.



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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Paper No. 111703

Application Number: 10/027,433
Filing Date: December 21, 2001
Appellant(s): JACKSON ET AL.

Brenda D. Wentz
For Appellant

EXAMINER'S ANSWER

NOV 20 2003

GROUP 1700

This is in response to the appeal brief filed 10/22/2003.

(1) *Real Party in Interest*

A statement identifying the real party in interest is contained in the brief.

(2) *Related Appeals and Interferences*

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief. There are no known other appeals or interferences which will directly affect, be directly affected, or have bearing on the Board's decision in the pending appeal.

(3) *Status of Claims*

The statement of the status of the claims contained in the brief is correct.

(4) *Status of Amendments After Final*

No amendment after final has been filed.

(5) *Summary of Invention*

The summary of invention contained in the brief is correct.

(6) *Issues*

The appellant's statement of the issues in the brief is correct.

(7) *Grouping of Claims*

The rejection of claims 1-5, 8, and 13-17 stand or fall together because appellant's brief does not include a statement that this grouping of claims does not stand or fall together and reasons in support thereof. See 37 CFR 1.192(c)(7).

(8) *Claims Appealed*

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) Prior Art of Record

5,882,808

OKU et al.

03-1999

WO 91/08179 A1 to Deith, published 06-1991

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-5, 8, and 13-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oku et al. in view of WO 91/08179 by Deith ("Deith").

Oku et al. teaches applying an antimicrobial agent to a substrate by providing a ceramic substrate, providing a conventional silica-based glaze containing an antimicrobial agent (silver oxide, silver-containing ion exchange compound), applying the glaze to the substrate and heating to form a finished coating on the substrate (Col. 1, line 50-Col. 2, line 18; Col. 3, lines 3-32; Example 1). Oku et al. does not teach applying the microbial agent with a sol-gel. Deith teaches applying a silica-based glaze to a ceramic substrate by a sol-gel method, as an alternative to a conventional, high temperature firing glaze, where the glaze is formed providing a sol-gel precursor formulation comprising a host precursor component (TEOS), allowing the formulation to form a sol-gel (which reads on the claimed compounding step), applying the sol-gel to the substrate and heating to temperatures below 800 °C to form a finished coating on the substrate

(Pg. 3, lines 12-34; Example). It would have been an obvious modification for one skilled in the art to apply the glaze of Oku et al. by the sol-gel method of Deith, where antimicrobial agent is merely added to the sol-gel glaze composition, with the expectation of gaining the additional benefit of providing the desired ceramic glaze layer in Oku et al. at lower heat treating temperatures than with the conventional glaze of Oku et al., as is taught by Deith.

Oku et al. and Deith do not teach the log kill rate for *Klebsiella pneumoniae*. However, since Oku et al. and Deith teach the claimed method and materials used, it would have been expected that the finished substrate would have inherently had the claimed log kill rate for *Klebsiella pneumoniae*. If this is not the case, then it must be due to critical limitations not being claimed. Furthermore, the mere observation of another benefit from an otherwise old process does not form the basis for patentability (*Allen et al. vs. Coe* 57 USPQ 136).

(11) Response to Argument

The appellant has argued against the combination of the Oku and Deith references. The examiner is not persuaded by the applicant's arguments. In response to appellant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the appellant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). The appellant argues that there is no motivation in the prior art for the combination of the Oku and Deith references, in that

Oku teaches away from the invention, as it teaches a firing temperature of 1200°C, while the claimed temperature is at most 800°C, and that modification of Oku with Deith would destroy the function of Oku. The examiner respectfully disagrees. Oku teaches applying an antimicrobial agent to a substrate by providing a ceramic substrate, providing a conventional silica-based glaze containing an antimicrobial agent (silver oxide, silver-containing ion exchange compound), applying the glaze to the substrate and heating to form a finished coating on the substrate, as set forth in the previous office action. Oku teaches that the ceramic substrate can be ceramic tile or earthenware (Abstract) and that the glaze can be a conventional silica-based glaze. Oku fails to teach applying the microbial agent with a sol-gel. Deith is applied by the examiner to teach applying a silica-based glaze to a ceramic substrate by a sol-gel method, as an alternative to a conventional, high temperature firing glaze. Deith teaches that the glaze can be applied to ceramic substrates, such as ceramic tiles and earthenware (Pg. 6, lines 9-10; Pg. 7, lines 10-11). One of ordinary skill in the art would have found it suggested to them, after review of the Oku and Deith references, to modify the Oku process by using the sol-gel glaze method of Deith to apply the glaze of Oku, where antimicrobial agent is merely added to the sol-gel glaze composition, with the expectation of gaining the additional benefit of providing the desired ceramic glaze layer in Oku at lower heat treating temperatures than with the conventional glaze of Oku, as is taught by Deith, since Deith clearly teaches that the sol-gel glaze is used for glazing the same materials (ceramic tile and earthenware) as that of Oku and that the low temperature firing, sol-gel glaze is a known alternative to the higher temperature firing, conventional glaze, such as that of Oku. Therefore, it is the examiner's position that there is motivation in the prior

art to the combination of the Oku and Deith reference, which renders the claimed invention obvious.

The appellant further argues that the combination of Oku and Deith is improper since Deith is not within the appellant's field of endeavor of anti-microbial sol-gel coating for hard surfaces. The examiner respectfully disagrees. In response to appellant's argument that Deith is nonanalogous art, it has been held that a prior art reference must either be in the field of appellant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the appellant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Deith is within the appellant's field of endeavor, as it is concerned with sol-gel application to a hard surface, which is directly within the appellant's field of endeavor. The mere fact that Deith does not specifically include an anti-microbial agent in the sol-gel does not remove the Deith process from the appellant's field of endeavor. It is the examiner's position that the teachings of Deith are analogous and pertinent to the appellant's claimed invention and thus its use as a basis for rejection is proper.

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For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Michael Barr
Primary Examiner
Art Unit 1762



MB
November 17, 2003

Conferees



Glenn Caldarola
Supervisory Patent Examiner
Technology Center 1700

Milliken & Company
P.O. Box 1927
Spartanburg, SC 29304



SHRIVE P. BECK
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700